

In the Claims:

1. (canceled).

2. (canceled).

3. (canceled).

4. (canceled).

5. (canceled).

6. (currently amended) A foamed spacer fluid comprising:

water selected from the group consisting of fresh water and salt water;

a weighting material selected from the group consisting of barium sulfate,

hematite, manganese tetraoxide and calcium carbonate present in an amount in the range of from  
about 49 to about 576 pounds per barrel of water;

a dispersing agent 6. ~~The foamed spacer fluid of claim 1 wherein the dispersing agent~~ is selected from the group consisting of naphthalene sulfonate condensed with formaldehyde, sodium polyacrylate, a terpolymer of acrylic acid, alkyloxybenzene sulfonate and methally sulfonate, formaldehyde, acetone, bisulfate condensate, melamine formaldehyde condensate, and mixtures thereof;

a suspending agent and friction reducer;

a mixture of foaming and foam stabilizing surfactants; and

a gas.

7. (currently amended) The foamed spacer fluid of claim + 6 wherein the dispersing agent is present in the foamed spacer fluid in an amount in the range of from about 3.5% to about 6% by weight of the water therein.

8. (currently amended) The foamed spacer fluid of claim + 6 wherein the suspending agent and friction reducer is selected from the group consisting of sepiolite, whelan gum, xanthan gum, hydroxyethyl cellulose, bentonite, attapulgite, and mixtures thereof.

9. (currently amended) The foamed spacer fluid of claim + 6 wherein the suspending agent and friction reducer is xanthan gum.

10. (currently amended) The foamed spacer fluid of claim + 6 wherein the suspending agent and friction reducer is present in the foamed spacer fluid in an amount in the range of from about 0.5% to about 2% by weight of the water therein.

11. (currently amended) The foamed spacer fluid of claim + 6 wherein the mixture of foaming and foam stabilizing surfactants is selected from the group consisting of a mixture of an ethoxylated alcohol ether sulfate surfactant, an alkyl or alkene amidopropyl betaine surfactant and an alkyl or alkene amidopropyl dimethyl amine oxide surfactant and a mixture of an alpha-olefinic sulfonate surfactant and an alkyl or alkene amidopropyl betaine surfactant.

12. (currently amended) The foamed spacer fluid of claim + 6 wherein the mixture of foaming and foam stabilizing surfactants is a mixture of an ethoxylated alcohol ether sulfate surfactant, an alkyl or alkene amidopropyl betaine surfactant and an alkyl or alkene amidopropyl dimethyl amine oxide surfactant.

13. (currently amended) The foamed spacer fluid of claim + 6 wherein the mixture of foaming and foam stabilizing surfactants is present in the foamed spacer fluid in an amount in the range of from about 0.5% to about 5% by weight of the water therein.

14. (currently amended) The foamed spacer fluid of claim + 6 wherein the gas is nitrogen.

15. (currently amended) The foamed spacer fluid of claim 16 wherein the gas is present in the foamed spacer fluid in an amount in the range of from about 15% to about 70% by volume of the water.

16. (currently amended) The foamed spacer fluid of claim 16 which further comprises a well bore wall scouring material selected from the group consisting of diatomaceous earth, crystalline silica, amorphous silica, and mixtures thereof.

17. (original) The foamed spacer fluid of claim 16 wherein the scouring material is crystalline silica.

18. (original) The foamed spacer fluid of claim 16 wherein the scouring material is present in the foamed spacer fluid in an amount in the range of from about 15% to about 30% by weight of the water therein.

19. (original) A foamed spacer fluid comprising:

water;

a weighting material selected from the group consisting of barium sulfate, hematite, manganese tetraoxide and calcium carbonate;

a dispersing agent selected from the group consisting of naphthalene sulfonate condensed with formaldehyde, sodium polyacrylate, a terpolymer of acrylic acid, alkyloxybenzene sulfonate and methally sulfonate, formaldehyde, acetone, bisulfate condensate, melamine formaldehyde condensate, and mixtures thereof;

a suspending agent and friction reducer selected from the group consisting of sepiolite, whelan gum, xanthan gum, hydroxyethyl cellulose, bentonite, attapulgite, and mixtures thereof;

a mixture of foaming and foam stabilizing surfactants selected from the group consisting of a mixture of an ethoxylated alcohol ether sulfate surfactant, an alkyl or alkene amidopropyl betaine surfactant and an alkyl or alkene amidopropyl dimethyl amine oxide surfactant and a mixture of an alpha-olefinic sulfonate surfactant and an alkyl or alkene amidopropyl betaine surfactant; and

a gas.

20. (original) The foamed spacer fluid of claim 19 wherein the water is selected from the group consisting of fresh water and salt water.

21. (original) The foamed spacer fluid of claim 19 wherein the weighting material is barium sulfate.

22. (original) The foamed spacer fluid of claim 19 wherein the weighting material is present in an amount in the range of from about 49 to about 576 pounds per barrel of water in the spacer fluid.

23. (original) The foamed spacer fluid of claim 19 wherein the dispersing agent is present in the foamed spacer fluid in an amount in the range of from about 3.5% to about 6% by weight of the water therein.

24. (original) The foamed spacer fluid of claim 19 wherein the suspending agent and friction reducer is xanthan gum.

25. (original) The foamed spacer fluid of claim 19 wherein the suspending agent and friction reducer is present in the foamed spacer fluid in an amount in the range of from about 0.5% to about 2% by weight of the water therein.

26. (original) The foamed spacer fluid of claim 19 wherein the mixture of foaming and foam stabilizing surfactants is a mixture of an ethoxylated alcohol ether sulfate surfactant, an

alkyl or alkene amidopropyl betaine surfactant and an alkyl or alkene amidopropyl dimethyl amine oxide surfactant.

27. (original) The foamed spacer fluid of claim 19 wherein the mixture of foaming and foam stabilizing surfactants is present in the foamed spacer fluid in an amount in the range of from about 0.5% to about 5% by weight of the water therein.

28. (original) The foamed spacer fluid of claim 19 wherein the gas is nitrogen.

29. 30. (currently amended) The foamed spacer fluid of claim 19 wherein the gas is present in the foamed spacer fluid in an amount in the range of from about 15% to about 70% by volume of the water.

30. 31. (currently amended) The foamed spacer fluid of claim 19 which further comprises a well bore wall scouring material selected from the group consisting of diatomaceous earth, crystalline silica, amorphous silica, and mixtures thereof.

31. 32. (currently amended) The foamed spacer fluid of claim 31 30 wherein the scouring material is crystalline silica.

32. 33. (currently amended) The foamed spacer fluid of claim 31 30 wherein the scouring material is present in the foamed spacer fluid in an amount in the range of from about 15% to about 30% by weight of the water therein.

33. 34. (canceled).

34. 35. (canceled).

35. 36. (canceled).

36. 37. (canceled).

37. 38. (currently amended) A foamed spacer fluid comprising:

water selected from the group consisting of fresh water and salt water;

a weighting material selected from the group consisting of barium sulfate, hemitate, manganese tetraoxide and calcium carbonate present in an amount in the range of from about 49 to about 576 pounds per barrel of water in the spacer fluid;

a dispersing agent 38. The foamed spacer fluid of claim 34 wherein the dispersing agent is selected from the group consisting of naphthalene sulfonate condensed with formaldehyde, sodium polyacrylate, a terpolymer of acrylic acid, alkyloxybenzene sulfonate and methally sulfonate, formaldehyde, acetone, bisulfate condensate, melamine formaldehyde condensate, and mixtures thereof present in an amount in the range of from about 3.5% to about 6% by weight of water in the spacer fluid;

a suspending agent and friction reducer present in an amount in the range of from about 0.5% to about 5% by weight of water in the spacer fluid;

a mixture of foaming and foam stabilizing surfactants present in an amount in the range of from about 0.5% to about 5% by weight of water in the spacer fluid; and

a gas present in an amount in the range of from about 15% to about 70% by volume of water in the spacer fluid.

38. 39. (currently amended) The foamed spacer fluid of claim 34 37 wherein the suspending agent and friction reducer is selected from the group consisting of sepiolite, whelan gum, xanthan gum, hydroxyethyl cellulose, bentonite, attapulgite, and mixtures thereof.

39. 40. (currently amended) The foamed spacer fluid of claim 34 37 wherein the suspending agent and friction reducer is xanthan gum.

40. 41. (currently amended) The foamed spacer fluid of claim 34 37 wherein the mixture of foaming and foam stabilizing surfactants is selected from the group consisting of a mixture of an ethoxylated alcohol ether sulfate surfactant, an alkyl or alkene amidopropyl betaine surfactant

and an alkyl or alkene amidopropyl dimethyl amine oxide surfactant and a mixture of an alpha-olefinic sulfonate surfactant and an alkyl or alkene amidopropyl betaine surfactant.

41. 42. (currently amended) The foamed spacer fluid of claim 34 37 wherein the mixture of foaming and foam stabilizing surfactants is a mixture of an ethoxylated alcohol ether sulfate surfactant, an alkyl or alkene amidopropyl betaine surfactant and an alkyl or alkene amidopropyl dimethyl amine oxide surfactant.

42. 43. (currently amended) The foamed spacer fluid of claim 34 37 wherein the gas is nitrogen.

43. 44. (currently amended) The foamed spacer fluid of claim 34 37 which further comprises a well bore wall scouring material selected from the group consisting of diatomaceous earth, crystalline silica, amorphous silica, and mixtures thereof.

44. 45. (currently amended) the foamed spacer fluid of claim 44 43 wherein the scouring material is crystalline silica.

45. 46. (currently amended) The foamed spacer fluid of claim 44 43 wherein the scouring material is present in the foamed spacer fluid in an amount in the range of from about 15% to about 30% by weight of the water therein.